

## What Is Claimed Is:

1. A route updating method for a micromobility network wherein routers are connected in a tree connection and radio base stations are connected to the routers in the lowest layer, and an updating notification of a route from a mobile terminal is repeated in order from a radio base station to successive higher order routers to update the route and a packet is distributed along the updated route, wherein a reaching range of an updating notification from the radio base station toward the higher order routers is set so that the reaching frequency of the updating notification is lower with a higher order router.

2. A route updating method for a micromobility network as claimed in claim 1, wherein directly lower order routers to each router are numbered to the numbers 1 to n with reference to the direct lower order router accommodation number n and a route from the radio base station to the router in the highest layer represented by a route number composed of the numbers of the thus numbered routers is applied to the radio base station, and upon updating notification, the route number is referred to to determine a stage number m of a transmission range and the updating notification is transmitted to a higher order router corresponding to the stage number m.

3. A route updating method for a micromobility network as claimed in claim 1, wherein, when the mobile terminal stays in the radio base station, where the stage number of higher order routers from the radio base station necessary to hold

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the route for the mobile terminal is represented by  $m$  and the direct lower order router accommodation number of each of the routers is represented by  $n$ , the transmission range of a packet is set to the router in the higher order  $m+1$ th stage from the radio base station once per  $n^m$  times.

4. A route updating method for a micromobility network as claimed in claim 2, wherein a notification of the route number applied to the radio base station is issued from the radio base station to the mobile terminal, and the mobile terminal determines the stage number  $m$  of the transmission range and transmits the stage number  $m$  together with the updating notification.

5. A route updating method for a micromobility network as claimed in claim 3, wherein a notification of the route number applied to the radio base station is issued from the radio base station to the mobile terminal, and the mobile terminal determines the stage number  $m$  of the transmission range and transmits the stage number  $m$  together with the updating notification.

6. A route updating method for a micromobility network as claimed in claim 2, wherein the radio base station which receives the updating notification from the mobile terminal determines the stage number  $m$  of the transmission range.

7. A route updating method for a micromobility network as claimed in claim 3, wherein the radio base station which receives the updating notification from the mobile terminal

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determines the stage number  $m$  of the transmission range.

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5 8. A route updating method for a micromobility network as claimed in claim 2, wherein a route holding time of each of said routers is  $n$  times that of the routers which are in the directly lower order to the router.

10 9. A route updating method for a micromobility network as claimed in claim 3, wherein a route holding time of each of said routers is  $n$  times that of the routers which are in the directly lower order to the router.

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